

AMENDMENTS TO THE CLAIMS:

Claim 1. (Currently amended) A semiconductor device tester comprising:

an electron beam irradiation means for irradiating a plurality of test samples sample with an electron beam;

a current measuring means for measuring current generated on a back surface of in each of said plurality of test samples sample by said electron beam;

memory means for storing current waveforms for each of a said plurality of test samples, wherein said current waveforms comprise variations of said measured current for each of said plurality of test samples in correspondence with irradiation positions of said electron beam on each of said plurality of test samples; and

comparator means for comparing the current waveforms and, when a difference between the current waveforms exceeds a predetermined value, outputting an information related to the position on one of said plurality of test samples sample at which the difference exists.

Claims 2-13. (Withdrawn).

Claim 14. (Currently amended) A semiconductor device test method comprising:

scanning a first test sample with an electron beam having a rectangular cross section, a longer side of which is substantially equal to a diameter of a contact hole in the first test sample, in a scan direction perpendicular to the longer side, moving the scan position by a distance equal to the diameter of the contact hole in a direction perpendicular to the scan direction every time when the scan of one line is completed and storing values of current generated on a back surface

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of in the first test sample when irradiated with the electron beam in correspondence with positions of the electron beam as a first current waveform;

scanning a second test sample with an electron beam having a rectangular cross section, a longer side of which is substantially equal to a diameter of a contact hole in the first test sample, in the scan direction, moving the scan position by a distance equal to the diameter of the contact hole in a direction perpendicular to the scan direction every time when the scan of one line is completed and storing values of current generated on a back surface of in the second test sample when irradiated with the electron beam in correspondence with positions of the electron beam as a second current waveform; and

comparing the first current waveform with the second current waveform and, when there is a difference exceeding a predetermined value between the first and second current waveforms, extracting coordinates of a position corresponding to the difference.

Claims 15 - 25. (Withdrawn).

26. (Currently amended) A semiconductor device tester comprising:
an electron beam gun that irradiates a plurality of test samples sample with an electron beam;
a current measurer that measures current generated on a back surface of in each of said plurality of test samples sample by said electron beam;
a memory that stores current waveforms for each of said a plurality of test samples, wherein said current waveforms comprise variations of said measured current for each of said plurality of test samples in correspondence with irradiation positions of said electron beam on

each of said plurality of test samples; and

a comparator that compares the current waveforms and, when a difference between the current waveforms exceeds a predetermined value, outputting an information related to the position on one of said plurality of test samples at which the difference exists.